



LEWIS & CLARK CITY-COUNTY Health Department

1930 Ninth Avenue
Helena, MT 59601
PH: 406.4HEALTH or 406.443.2584
Fax: 406.457.8990

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Contact: Melanie Reynolds, Health Officer, 406-457-8910

Gayle Shirley, Communications Manager, 406-457-8908

Plant a Tree, Improve Our Public Health

**By Melanie Reynolds
County Health Officer**

Next week, we honor our life-giving planet with Earth Day (April 22) and Arbor Day (April 24). What better way to celebrate these springtime rites than by planting a tree?

A growing body of evidence suggests that trees not only have aesthetic and environmental value, they benefit public health in many ways, too.

In 2011, a national task force of urban and environmental specialists met to explore what makes a vibrant community. Among the factors they considered were “urban forests.”

They concluded that “trees are the key” to creating and managing sustainable communities and – not incidentally – to alleviating many public health challenges. While planting a tree may not actually cure our ills, there does seem to be a statistical link between trees and better health.

“We know much more about the positive link between health and nature than we did 10 years ago.” said task force member Jim Skiera in a 2014 interview with the American Public Health Association. “Research findings on the social and health benefits of urban forests are capturing the attention of public health officials on a global scale.”

For example, the World Health Organization (WHO) is developing guidelines for improving access to green space in cities because of the link to better health.

Here in Helena, that connection helped to inspire the community “garden park” that will break ground this spring in the Sixth Ward.

If planting a tree is on your agenda, you may be pleased to know that your project will help to reap the following health benefits.

Mental Health

Stress and physical inactivity are two of the leading contributors to premature death in developed countries, according to WHO. Trees play a role in reducing both of them.

In Sweden, researchers found that the more often people visited green areas, the less often they reported stress-related illnesses.

The Japanese also follow this prescription. It's tradition in their culture to leave the city to walk in forests on the weekends. They call this restorative practice *shinrin-yoku* (forest bathing). Studies have found that it improves immune system response, lowers stress, reduces depression, and even lowers glucose levels in diabetics.

Studies in Chicago found that green space, especially trees, helped to encourage neighborly interactions and reduce feelings of social isolation. These are risk factors for depression.

Other scientific studies have shown that activity in green settings can help reduce symptoms of Alzheimer's, dementia, and attention deficit disorder.

Physical Activity

By creating an attractive environment, urban forests may entice sedentary people to become more physically active. Who wouldn't prefer to take a walk in the shade of a tree-lined path?

A recent British study found that people living in areas with lots of greenery were three times more likely to be physically active and 40 percent less likely to be overweight or obese than other people.

Another study has found that elderly people who had nearby parks and tree-lined streets for walking lived longer than their peers over a five-year period.

And as gardeners and landscapers know, the act of digging a hole and planting a tree provides lots of exercise itself!

Skin Cancer Protection

Trees cool the atmosphere and make hot days more tolerable. Their foliage also offers protection from the sun's UV rays. Overexposure to these rays can cause skin cancer.

An individual tree can provide a sun protection factor (SPF) of 6 to 10, according to *Urban Forests and Trees*, a 2005 book by European experts.

Chronic Disease

The Centers for Disease Control and Prevention report that chronic diseases are among the most prevalent, costly, and preventable of all health problems. Trees have been credited with playing a role in reducing the incidence of some chronic diseases.

A 2013 study took advantage of an infestation of emerald ash borers that decimated the trees in 15 states. The authors reported in the *Journal of Preventive Medicine* that residents in denuded neighborhoods suffered 15,000 more deaths from heart disease and 6,000 more from lower respiratory disease than residents in areas where trees were uninfected.

Air Quality

We learned in grade school that trees help us by taking in carbon dioxide and giving out oxygen during photosynthesis. They also absorb sulphur dioxide, nitrous oxides, and particulate pollution (dust, ash, pollen, and smoke). Some of these pollutants can cause serious health problems, including asthma, respiratory heart disease, and cancer.

According to the University of Washington College of Forest Resources, a mature tree can absorb 120-240 pounds of particulate pollution a year.

A 2007 study by researchers at Columbia University found that children living in areas with more street trees are less likely to have asthma.

Water Quality

Trees naturally help manage stormwater runoff, reducing it by 2-7 percent, according to the Arbor Foundation. In turn, that reduces the amount of sediment and pollutants that reach groundwater, streams, and lakes.

Tree roots help filter pollutants like nitrogen from the soil, which protects the groundwater we drink.

The evidence supporting the connection between greener communities and healthier communities just keeps growing. So go forth and plant that tree!